STATEMENT OF BASIS

for draft Louisiana Pollutant Discharge Elimination System permit No. LA0102253
to discharge to waters of the State of Louisiana.
AI No.: 42589 / Activity No.: PER20090001

THE APPLICANT IS: N-E-W Carroll Water Association Inc.
P.O. Box 427
Kilbourne, LA 71253

THE FACILITY IS: N-E-W Carroll Water Association Treatment Plant
204 Sam Street
Kilbourne, West Carroll Parish

ISSUING OFFICE: Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

PREPARED BY: Bonnie Wascom

DATE PREPARED: November 23, 2009

1. PERMIT STATUS

A. LPDES permit – LA0102253
LPDES permit effective date: May 1, 2004
LPDES permit expiration date: April 30, 2009

B. LWDPS permit – NA
LWDPS permit effective date: NA
LWDPS permit expiration date: NA

C. Date Application Received: September 22, 2009

2. FACILITY INFORMATION

A. FACILITY TYPE/ACTIVITY – potable water treatment plant

The N-E-W Carroll Water Association Treatment Plant is an existing water treatment facility in Kilbourne, West Carroll Parish. Source water is from ground water wells. First, caustic and Potassium Permanganate are blended with the raw water. The water is then sent through the greensand filters and then to the zeolite softeners. After the water is softened, it is injected with chlorine in the distribution lines.

The filters are backwashed with treated water every two to three days and the softeners are regenerated with a brine solution after the treatment of

180,000 gallons of water. All backwash and regeneration wastewater flows into a settling pond prior to being discharged. There are no other wastewater discharges from this facility.

B. FEE RATE

1. Fee Rating Facility Type: minor
2. Complexity Type: I
3. Wastewater Type: III
4. SIC codes: 4941

C. LOCATION - 204 Sam Street
Kilbourne, West Carroll Parish
Latitude +32° 58' 30", Longitude -91° 19' 57"

3. OUTFALL INFORMATION

Outfall 001

Discharge Type: Filter Backwash and Softener Regeneration Wastewater
Treatment: Settling pond
Location: at the point of discharge from the settling pond prior to mixing with other waters
Flow: 0.037 MGD
Discharge Route: by open ditch to Tiger Bayou, thence to Big Colewa, thence to Big Creek

4. RECEIVING WATERS

STREAM – Outfall 001 – by open ditch to Tiger Bayou, thence to Big Colewa, thence to Big Creek

HARMONIC MEAN – 1 cfs (see attached November 23, 2009, Memorandum from Todd Franklin to Bonnie Wascom)

BASIN AND SEGMENT – Ouachita River – Subsegment 080901

DESIGNATED USES -

a. Primary contact recreation
b. Secondary contact recreation
c. Propagation of fish and wildlife

5. EXISTING EFFLUENT LIMITS

1. **Outfall 001** – Filter Backwash and Softener Regeneration Wastewater

Pollutant	Limitation Mo. Avg.: Daily Max.	Monitoring
Flow	----: Report (GPD)	Monthly
TSS	30: 45 mg/L	Monthly
Total Recoverable Iron	----: Report	Quarterly
Chlorides	3,913: 9,290 mg/L	Monthly
pH	6.0 - 9.0 s.u.	Monthly
Clarifying Agents Used	----: Report	Monthly

PROPOSED EFFLUENT LIMITS

BASIS – See rationale below.

6. COMPLIANCE HISTORY/COMMENTS

A. Compliance History

Warning Letter WE-L-06-0055 was issued on March 6, 2006 for failure to submit reports in a timely manner.

An inspection conducted on May 15, 2006 noted that three years of records, including but not limited to, the permit, permit application addendum, DMRs, sample analysis reports, non-compliance reports, or maintenance records were not presented or revealed during the inspection.

A Notice of Corrected Deficiency was issued on October 31, 2007 stating that the areas of concern noted during the inspection of May 15, 2006 had been addressed.

B. DMR Review/Excursions

A DMR review was performed for the period of January 2007 – September 2009. For Outfall 001, 18 DMRs were reviewed with excursions for the TSS parameter reported.

Reported Exceedances				
Outfall	**Date**	**Parameter**	**Limit**	**Reported**
001	May 2008	TSS	45 mg/L Daily Max.	57 mg/L
001	May 2008	TSS	30 mg/L Mo. Avg.	57 mg/L
001	March 2008	TSS	45 mg/L Daily Max.	50.7 mg/L
001	March 2008	TSS	30 mg/L Mo. Avg.	50.7 mg/L
001	February 2008	TSS	45 mg/L Daily Max.	54.4 mg/L

001	February 2008	TSS	30 mg/L Mo. Avg.	54.4 mg/L
001	April 2007	TSS	45 mg/L Daily Max.	108.2 mg/L
001	April 2007	TSS	30 mg/L Mo. Avg.	108.2 mg/L

8. ENDANGERED SPECIES

The receiving waterbodies and proposed discharge are not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated November 17, 2008 from Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. Therefore, the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

9. 303 (d) LISTED WATERBODIES

Subsegment 080901, Bouef River – from Arkansas state line to Ouachita River, is not listed on LDEQ's Final 2006 303(d) list as impaired. However, subsegment 080901 was previously listed as impaired for phosphorus, nitrogen, organic enrichment/low DO, Mercury, suspended solids/ turbidity/ siltation, and selected pesticides, for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDL's and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDL's have been established for Segment 080901:

Organic Enrichment/Low DO

Organic enrichment/low DO was addressed by the Bouef River Watershed TMDL for Biochemical Oxygen-Demanding Substances and Nutrients including WLAS for one facility, the Town of Rayville STP. This facility was not included in the TMDL Models, and a WLA was not developed for this facility because, according to the TMDL, the remaining existing point sources have no impact on the main stem of Bouef River and require no changes to their permitted discharges. In addition, this facility has no potential to contribute to this impairment. Therefore, requirements for Organic enrichment/low DO will not be placed in this permit.

Phosphorus and Nitrogen

LDEQ has not established numeric WQ standards for phosphorous and nitrogen. The narrative criterion for nutrients reads, "The naturally occurring range of nitrogen-phosphorus ratios shall be maintained." LDEQ has determined that the ration is being maintained for this subsegment, and therefore, no requirements for phosphorus or nitrogen will be placed in this permit.

Mercury

There is no fish advisory for this segment. LDEQ completed water quality evaluations using clean methods for sampling and analysis for 2000-2001. All values were less than the state criterion. This waterbody is currently meeting water quality standards for Mercury and this facility has no potential to discharge Carbofuran; therefore, no requirements for Mercury will be placed in this permit.

Carbofuran/DDT/Dioxin/Siltation

As per the *TMDL for Selected Pesticides in the Ouachita River Basin*, no allocation was given to point source discharges in the Ouachita River Basin. According to the TMDL, there are no known point sources for carbofuran, DDT, methyl parathion, or toxaphene in the Bouef River watershed. In addition, this facility has no potential to discharge pesticides. Therefore, requirements for pesticides will not be placed in this permit.

Suspended solids/turbidity/siltation

As per TMDL for TSS, Turbidity, and Siltation for 13 Subsegments in the Ouachita River Basin, "Point sources do not represent a significant source of TSS as defined in this TMDL. Because an enforceable mechanism is in place to protect from discharges of organic suspended solids no TMDL is required for these materials." Therefore, TSS limits will remain as previously permitted.

10. HISTORIC SITES

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

11. TENTATIVE DETERMINATION

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in the application.

12. PUBLIC NOTICES

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation
Office of Environmental Services Public Notice Mailing List

Rationale for N-E-W Carroll Water Association Treatment Plant

1. **RLP 1 Outfall 001** – Filter Backwash and Softener Regeneration Wastewater

Pollutant	Limitation* Mo. Avg.: Daily Max.	Reference
Flow (MGD)	---: Report	LAC 33:IX.2361.I.1.b
TSS	30: 45 mg/L	Potable Water Treatment Plant General Permit
Chlorides	3,205: 7,610 mg/L	Water Quality
Clarifying Agents Used	Report: Report	Potable Water Treatment Plant General Permit
Total Recoverable Iron	---: Report mg/L	Potable Water Treatment Plant General Permit
pH	6.0 (min.) - 9.0 (max.) s.u.	Potable Water Treatment Plant General Permit

Treatment: Settling Pond

Monitoring Frequency: Once per month for Flow, Chlorides, TSS, and pH and once per three months for Total Recoverable Iron at the point of discharge from the settling pond prior to mixing with other waters. Clarifying Agents Used: document monthly in an inventory record the quantity and type of any clarifying agent used.

***Limits Justification:** For all parameters except Chlorides, limits and monitoring frequencies are based on the Potable Water Treatment Plant General Permit (LAG380000). A water quality screen (attached) was performed to calculate the water quality based limit for chlorides.

The receiving waterway (Tiger Bayou) is not listed by name in the Numerical Criteria and Designated Use Table (LAC 33:IX.1123 Table 3); therefore, an in-stream chloride standard of 250 mg/l is established in accordance with LAC 33:IX.1113.C.2, which states that chloride concentration levels for unlisted waterways "will be permitted at the discretion of the department on a case-by-case basis and shall not cause in-stream concentrations to exceed 250 mg/L".

Receiving stream flow was established for Tiger Bayou by the engineering support group at 0.1 cfs 7Q10 and 1 cfs harmonic mean. (See attached November 23, 2009, Memorandum from Todd Franklin to Bonnie Wascom)

The harmonic mean, rather than the critical flow, was used for calculating the permit limitations for the chloride discharges in accordance with LAC 33:IX.1115.C.8, which states "For chlorides, sulfates and total dissolved solids, criteria are to be met below the point of discharge after complete mixing. Because criteria are developed over a long-term period, harmonic mean flow will be applied for mixing."

Page 8 of the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standard provides, under Harmonic Mean Flow, that a harmonic mean value of 1 cfs shall be the default harmonic mean flow when harmonic mean value is ≤ 1 cfs, for streams not designated intermittent at LAC 33.IX.1123, Table 3. Therefore, a harmonic mean value of 1 cfs was used in the calculations to determine the appropriate water quality based limit for chlorides.

The calculation employing the new total flow of 0.037 MGD yielded values of 3,205 mg/l (Monthly Average) and 7,610 mg/l (Daily Maximum). It was determined that a water quality based permit limitation is necessary to maintain the in-stream standard of 250 mg/l which was established to protect the uses of the water body as primary and secondary contact recreation, and fish and wildlife propagation.

Note: The Potable Water Treatment Plant General Permit is not appropriate for this facility because the facility treats the raw water by means of a zeolite ion exchange in the softening process. The zeolite is recharged using a sodium chloride solution that produces a high chloride concentration in the wastewater. Therefore, a facility specific permit is required to determine the appropriate water quality based permit limit for discharges of chlorides.

BPJ	Best Professional Judgment
BAT	Best Available Technology Economically Achievable
GPD	Gallons per Day
MGD	Million Gallons per Day
s.u.	Standard Units

NOTE: For outfalls containing concentration limits, the usage of concentration limits is based on BPJ for similar outfalls since the flow is variable and estimated.

Storm Water Pollution Prevention Plan (SWP3) Requirement

Discharges from this facility are not classified as industrial storm water per LAC 33:IX.2341.B.14. Therefore, the Storm Water Pollution Prevention Plan (SWP3) requirement is not included in this permit.

However, per LAC 33:IX.903.B, all above ground storage tanks with a capacity of 660 gallons for an individual container or 1320 for multiple containers, must have secondary containment and a Spill Prevention and Control Plan.

Monitoring Frequency

Please be aware that the Department has the authority to reduce monitoring frequencies when a permittee demonstrates two or more consecutive years of permit compliance. Monitoring frequencies established in LPDES permits are based on a number of factors, including but not limited to, the size of the discharge, the type of wastewater being discharged, the specific operations at the facility, past compliance history, similar facilities and best professional judgment of the reviewer. We encourage and invite each permittee to institute positive measures to ensure continued compliance with the LPDES permit, thereby qualifying for reduced monitoring frequencies upon permit reissuance. If the Department can be of any assistance in this area, please do not hesitate to contact us. As a reminder, the Department will also consider an increase in monitoring frequency upon permit reissuance when the permittee demonstrates continued non-compliance.